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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,670	03/23/2001	Hiroshi Yoshida	09792909-4825	5768

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EXAMINER

LEUNG, QUYEN PHAN

ART UNIT	PAPER NUMBER
	2828

DATE MAILED: 07/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A-7

<b>Office Action Summary</b>	Application N .	Applicant(s)
	09/815,670	YOSHIDA ET AL.
	Examin r	Art Unit
	Quyen P. Leung	2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 16 May 2003.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1,3,5-9,11,13-17,19 and 21-24 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1,3,5-9,11,13-17,19 and 21-24 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.

6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/16/03 has been entered.

### ***Response to Amendment***

2. In response to applicant's amendment filed 5/16/2003, claims 1, 9 and 17 have been amended and claims 4, 12 and 20 canceled.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 3, 5-9, 11, 13-17, 19, 21-24 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

4. Claims 3, 11 and 19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In applicant's

amendment filed 5/16/2003, claims 1, 9, and 17 were amended to further include the features claimed in claims 3, 11, and 19.

5. Applicant is advised that should claims 5, 13, 21 be found allowable, claims 7, 15, 23 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

#### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 6, 8, 14, 16, 22, and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 8, 14, 16, 22, and 24 are unclear because they depend upon canceled claims 2, 4, 10, 12, 18 and 20, respectively. For examining purposes, it was assumed that they depend on independent claims 1, 9 and 17.

#### ***Claim Rejections - 35 USC § 102***

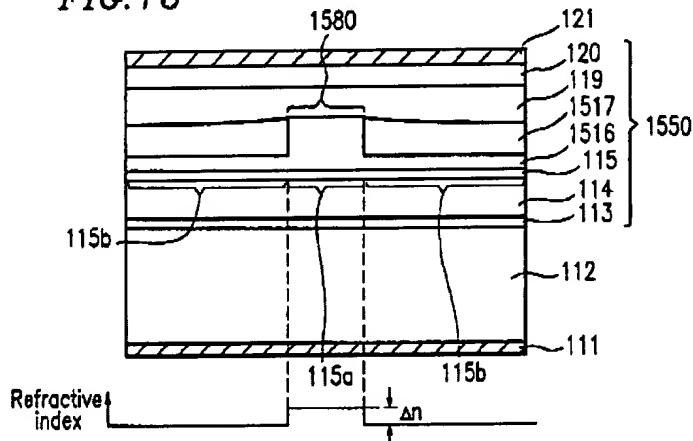
8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3, 5-9, 11, 13-17, 19, 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kume (5,923,690). Kume discloses the claimed invention. For example, note figure 15 which illustrates a semiconductor laser light emitting device comprising a stacked film composed of a stack of group III nitride semiconductor films (1550) each containing at least one kind selected from aluminum, gallium, indium and boron, wherein an upper portion (1516) of the stacked film is formed into a ridge-like stripe (1580), to form a current injection region, a current non-injection region (1517) formed on both sides of the ridge-like stripe (1580) and at least part of the current non-

**FIG. 15**



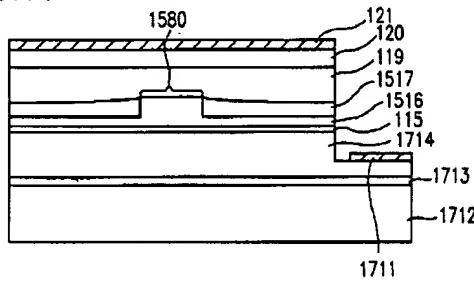
injection region (1517) is

made from a material ( $\text{Al}_{x=0.25}\text{Ga}_{1-x}\text{N}$ ) expressed by a chemical formula  $\text{AlGaN}$ , the improvement wherein the component "x" of Al is specified at a value in a range of  $0.15 < x < 0.30$ , so that the semiconductor laser light emitting device is configured as a weak index type pulsation semiconductor laser light emitting device.

Note also figure 17.

Kume et al teaches the same ranges as claimed by applicant, see col. 15 lines 24-26 and lines 50-55. Furthermore, applicant discusses the device being configured as an index-guided type (see col. 16 line 20), as a gain-guided type (see col. 16 line 35) and as a weak index type (see col. 16 lines 46-51).

*FIG. 17*



Regarding the newly added features of a film located between the active layer (115) and the current non-injection region (1517) of the stacked film made from a material expressed by a chemical formula  $Al_xGa_{1-x}N$  (where  $x$  is one of  $(0.3 \leq x \leq 1.0)$ ,  $(0.15 \leq x \leq 0.30)$  or  $(0 \leq x \leq 0.15)$ ) and has a thickness of 0.2 microns or less, note Kume's teaching of a zero-thickness film of the compositional range film ( $0 \leq x < 0.15$  and  $0.15 < x \leq 1$ ) located between the active layer (115) and the current non-injection region (1517) of the stacked film. See Kume's col. 16 lines 45-46 and col. 15 lines 23-24.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quyen P. Leung whose telephone number is (703) 308-0545. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Quyen P. Leung  
Primary Examiner  
Art Unit 2828

QPL  
July 10, 2003